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| 10/675,638 | 09/29/2003 | Gautam G. Reddy | I-2-0386.1US | 6062 |

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EXAMINER

PHUONG, DAI

ART UNIT PAPER NUMBER

2685

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,638

Applicant(s)

REDDY ET AL.

Examiner

Dai A. Phuong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/29/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Akhterzzaman et al. (Pub. No: 2003/0008644).

Regarding claim 1, Akhterzzaman et al. disclose in fig. 1 a method for wireless mobile unit 119 and 121 communication within a wireless network 123 having geographic areas for preferred communication usage 109 and 111, comprising the steps of: determining an estimated geographic location of a mobile unit ([0017]); and providing the mobile unit with relative position data of at least one preferred communication area relative to the determined mobile unit estimated location ([0019]. Specifically, Akhterzzaman et al. disclose transceivers 115 and 117 at each cell site **transmit restricted-use location information to the communication devices** in that coverage area. For example, information regarding three locations 105, 107, and 109 in the first area 101 are transmitted by the first transceiver 115 to communication devices 119 in the first area 101, and information regarding two locations 111 and 113 in the second area 103 are transmitted by the second transceiver 117 to communication devices 121 in the second area 103).

Regarding claim 9, Akhterzzaman et al. disclose all the limitation in claim 1. Further, Akhterzzaman et al. disclose the method wherein the network monitors determined mobile unit estimated locations and relative position data is periodically transmitted to the mobile unit that is determined by the network, based on current mobile unit estimated location data and dynamic data of network usage ([0016]).

Regarding claim 10, Akhterzzaman et al. disclose all the limitation in claim 1. Further, Akhterzzaman et al. disclose the method wherein the method wherein the mobile unit is equipped with a global positioning system (GPS) and the mobile unit estimated location is determined by using the mobile unit's global positioning system (GPS) ([0017]).

Regarding claim 11, Akhterzzaman et al. disclose all the limitation in claim 1. Further, Akhterzzaman et al. disclose the Akhterzzaman et al. disclose method wherein relative position data is determined by the network based on the determined mobile unit estimated location data and dynamic data of network usage data such that a ranked preference order of preferred communication areas is determined and relative position data at least a first preferred communication area preference is transmitted by a network base station to the mobile unit ([0016] and [0019]. Specifically, Akhterzzaman et al. disclose when new location information is provided, it may be **immediately transmitted** to the communication devices in the relevant coverage area. Adding or deleting a restricted-use area may also be handled by request in a real-time manner).

Regarding claim 12, Akhterzzaman et al. disclose all the limitation in claim 1. Further, Akhterzzaman et al. disclose the method further comprising the steps of: defining preferred

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communication areas by respective sets of geographical coordinates ([0016]); storing said coordinate sets in a network database ([0019]. Specifically, Akhterzzaman et al. disclose when new location information is provided, it may be **immediately transmitted** to the communication); and selectively transmitting from a network base station one or more of the data sets to provide the mobile unit with relative position data ([0019]).

3. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Kang (Pub. No: 2004/0224682).

Regarding claim 14, Kang discloses a mobile unit for communication within a wireless network having geographic areas pre-designated for preferred communication usage, comprising:

a transmitter that is configured to initiate a request for a pre-designated preferred communication area location when the mobile unit is not within a hot spot area of the network ([0038]. Specifically, Kang discloses the mobile station sends a location registration (Home Zone and Non-Home Zone) **request to the visitor location register (VLR) (VLR)** of the mobile switching center (MSC) through the base station and the base station controller (BSC));

a receiver configured to receive geographic location data corresponding to at least one pre-designated preferred communication area serviced by the network ([0042] and [0043]. Specifically, Kang discloses the mobile station **informs the subscriber** through a string of characters whether the **present location belongs to the home zone or the non-home zone**); and

a user output device for alerting a mobile unit user of the relative position of at least one pre-designated preferred communication area serviced by the network to a determined mobile unit estimated location ([0030]. Specifically, Kang discloses the mobile station can indicate

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through a string of characters whether the present location belongs to the home zone or the non-home zone or using a specific tone to indicate whether the mobile station has moved from the home zone to the non-home zone or from the non-home zone to the home zone).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-7 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Akhterzzaman et al. (Pub. No: 2003/0008644) in view of Kang (Pub. No: 2004/0224682).

Regarding claim 2, Akhterzzaman et al. disclose all the limitation in claim 1. But, Akhterzzaman et al. do not disclose the method further comprising the steps of: initiating a request for a pre-designated preferred communication area location by the mobile unit transmission; and receiving the request by a network base station.

In the same field of endeavor, Kang discloses the method further comprising the steps of: initiating a request for a pre-designated preferred communication area location (**Home Zone and Non-home Zone**) by the mobile unit transmission ([0038]); and receiving the request by a network base station ([0038]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication device of Akhterzzaman et al. by specifically including comprising the steps of: initiating a request for a pre-designated preferred

communication area location by the mobile unit transmission; and receiving the request by a network base station, as taught by Kang, the motivation being in order to indicate the location of the service zone to the mobile station to inform whether the mobile station is located within the home-zone service.

Regarding claim 3, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 2. Further, Kang discloses the method wherein the mobile unit is equipped with a global positioning system (GPS), the mobile unit estimated location is determined by using the mobile unit's global positioning system (GPS) ([0038]. Specifically, Kang discloses the visitor location register (VLR) sends the mobile station a request message for indicating the present location, in step s260. The mobile station indicates the present location in response to the request message from the visitor location register (VLR). In addition, Akhterzzaman et al. disclose the communication device 119 periodically determines its current location. The communication device 119 determines its location in any number of ways as known in the art, in section [0017]), the mobile unit request transmission includes current mobile unit estimated location data, and the network base station transmits to the mobile unit relative position data that is determined by the network based on the current mobile unit estimated location data ([0038] and [0042]).

Regarding claim 4, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 3. Further, Kang discloses the method wherein the relative position data transmitted by the network base station to the mobile unit is determined by the network, based on the current mobile unit estimated location data and dynamic data of preferred communication area usage ([0040] to [0042]).

Regarding claim 5, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 2. Further, Kang discloses the method wherein a current mobile unit estimated location is determined by the wireless network analyzing data related to physical properties of the mobile unit request transmission and the network base station transmits to the mobile unit relative position data that is determined by the network based on the current mobile unit estimated location data ([0040] to [042]).

Regarding claim 6, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 5. Further, Kang discloses the method wherein the relative position data transmitted by the network base station to the mobile unit is determined by the network, based on the current mobile unit estimated location data and dynamic data of pre-designated preferred communication area usage ([0040] to [0042]).

Regarding claim 7, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 2. Further, Kang discloses the method wherein the mobile unit is equipped with a global positioning system (GPS), the mobile unit estimated location is determined by using the mobile unit's global positioning system (GPS) ([0042]). Specifically, Kang discloses the visitor location register (VLR) requests the mobile station to newly indicate the present location through the base station and the base station controller (BSC). Furthermore, Akhterzzaman et al. disclose the communication device 119 periodically determines its current location. The communication device 119 determines its location in any number of ways as known in the art. For example, satellite-based GPS may be utilized, whereby timing and location information are transmitted from a satellite directly to a Global Positioning System (GPS) receiver, as known in the art, in section [0017]), the network base station transmits to the mobile

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unit geographic location data of all network pre-designated preferred communication areas serviced by the base station, and relative position data is determined by the mobile unit ([0040] to [0042]).

Regarding claim 13, Akhterzzaman et al. disclose all the limitation in claim 1. Further, Kang discloses the method wherein the mobile unit is equipped with a map display, the method of further comprising the step of using relative position data to display hot spot areas relative to the estimated mobile unit location and relocating the mobile unit to a preferred communication area based on the relative position data.

In the same field of endeavor, Kang discloses the method wherein the mobile unit is equipped with a map display, the method of further comprising the step of using relative position data to display hot spot areas relative to the estimated mobile unit location and relocating the mobile unit to a preferred communication area based on the relative position data ([0043] and [0043]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication device of Akhterzzaman et al. by specifically including the mobile unit is equipped with a map display, the method of further comprising the step of using relative position data to display hot spot areas relative to the estimated mobile unit location and relocating the mobile unit to a preferred communication area based on the relative position data, as taught by Kang, the motivation being in order to indicate the location of the service zone to the mobile station to inform whether the mobile station is located within the home-zone service

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akhterzzaman et al. (Pub. No: 2003/0008644) in view of Kang (Pub. No: 2004/0224682) and further in view of Tsutsumi (Pub. No: 2004/0220995).

Regarding claim 8, the combination of Akhterzzaman et al. and Kang disclose all the limitation in claim 2. But, the combination of Akhterzzaman et al. and Kang do not disclose the method wherein the network permits direct mobile unit wireless communications with network base stations and also peer-to-peer wireless communications between mobile units and wherein the request initiated by the mobile unit and received by the network base station is relayed via a different mobile unit located in a pre-designated preferred communication area serviced by the base station.

In the same field of endeavor, Tsutsumi discloses the method wherein the network permits direct mobile unit wireless communications with network base stations and also peer-to-peer wireless communications between mobile units and wherein the request initiated by the mobile unit and received by the network base station is relayed via a different mobile unit located in a pre-designated preferred communication area serviced by the base station.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the communication device of the combination of Akhterzzaman et al. and Kang by specifically including the method wherein the network permits direct mobile unit wireless communications with network base stations and also peer-to-peer wireless communications between mobile units and wherein the request initiated by the mobile unit and received by the network base station is relayed via a different mobile unit located in a pre-

designated preferred communication area serviced by the base station, as taught by Tsutsumi, the motivation being in order to request the first information terminal to perform desired information processing by the second information terminal.

7. Claims 15-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (Pub. No: 2004/0224682) in view of Akhterzzaman et al. (Pub. No: 2003/0008644).

Regarding claim 15, Kang discloses all the limitation in claim 14. Further, Kang discloses the invention further comprising wherein the transmitter is configured to transmit the pre-designated preferred communication location request by transmitting a signal that includes current mobile unit estimated location data ([0038]), and wherein the mobile unit receiver is configured to receive geographic location data corresponding to at least one pre-designated preferred communication area in the form of relative position data that is determined by the network based on the transmitted mobile unit estimated location data ([0042] and [0043]). But, Kang does not disclose the invention further comprising a global positioning system (GPS) that determines an estimated location of the mobile unit.

In the same field of endeavor, Akhterzzaman et al. disclose the invention further comprising a global positioning system (GPS) that determines an estimated location of the mobile unit ([0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Kang by specifically including a global positioning system (GPS) that determines an estimated location of the mobile unit, as taught by

Akhterzzaman et al., the motivation being in order to determine when it is within the designated geographical areas.

Regarding claim 16, Kang discloses all the limitation in claim 14. Further, Kang discloses the invention wherein the mobile unit receiver is configured to receive geographic location data corresponding to at least one pre-designated preferred communication area in the form of relative position data that is determined by the network, based on a mobile unit estimated location determined by the wireless network analyzing data related to physical properties of the mobile unit request transmission ([0040] to [0042]).

Regarding claim 17, Kang discloses all the limitation in claim 14. Further, Kang discloses the invention further comprising that determines an estimated location of the mobile unit and that calculates relative position data based on geographic location data corresponding to at least one pre-designated preferred communication area serviced by the network received in response to a transmitted request ([0040] to [0042]). But, Kang does not disclose the invention further comprising a global positioning system (GPS)

In the same field of endeavor, Akhterzzaman et al. disclose the invention further comprising a global positioning system (GPS) that determines an estimated location of the mobile unit ([0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Kang by specifically including a global positioning system (GPS) that determines an estimated location of the mobile unit, as taught by

Akhterzzaman et al., the motivation being in order to determine when it is within the designated geographical areas.

Regarding claim 18, this claim is rejected for the same reason as set forth in claim 8.

Regarding claim 19, Kang discloses all the limitation in claim 14. Further, Kang discloses the invention further comprising a map display configured to visually display pre-designated preferred communication areas relative to the estimated mobile unit location ([0042] and [0043]).

Regarding claim 20, Kang discloses all the limitation in claim 14. Further, Kang discloses the invention wherein the mobile unit is configured for wireless communication in a wireless local area network (WLAN) ([0026])

Regarding claim 23, Kang discloses all the limitation in claim 14. But, Kang do not disclose the invention wherein the user output device for alerting a mobile unit user of the relative position comprises a power use indicator that is active when the mobile unit is not physically located in a pre-designated preferred communication area where power consumption is relatively high.

In the same field of endeavor, Akhterzzaman et al. the invention wherein the user output device for alerting a mobile unit user of the relative position comprises a power use indicator that is active when the mobile unit is not physically located in a pre-designated preferred communication area where power consumption is relatively high ([0018]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Kang by specifically including the user output device for alerting a mobile unit user of the relative position comprises a power use indicator that is active when the mobile unit is not physically located in a pre-designated preferred communication area where power consumption is relatively high, as taught by Akhterzzaman et al., the motivation being in order to determine when it is within the designated geographical areas.

8. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (Pub. No: 2004/0224682) in view of Akerberg et al. (Pub. No: 2003/0109284)

Regarding claim 21, Kang discloses all the limitation in claim 14. But, Kang do not disclose the invention wherein the mobile unit is configured for wireless communication in a time division duplex (TDD) telecommunications system.

In the same field of endeavor, Akerberg et al. disclose the invention wherein the mobile unit is configured for wireless communication in a time division duplex (TDD) telecommunications system ([0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Kang by specifically including disclose the invention wherein the mobile unit is configured for wireless communication in a time division duplex (TDD) telecommunications system, as taught by Akerberg et al., the motivation being in order to allow a more flexible assignment of uplink and downlink carriers.

Regarding claim 22. Kang discloses all the limitation in claim 14. But, Kang do not disclose the invention wherein the mobile unit is configured for wireless communication in a frequency division duplex (FDD) telecommunications system.

In the same field of endeavor, Akerberg et al. disclose the invention wherein the mobile unit is configured for wireless communication in a frequency division duplex (FDD) telecommunications system ([0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile station of Kang by specifically including the mobile unit is configured for wireless communication in a frequency division duplex (FDD) telecommunications system, as taught by Akerberg et al., the motivation being in order to allow a more flexible assignment of uplink and downlink carriers.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Piccionei et al. (U.S. 6154172) limiting distribution of information on a communication network

Havins et al. (U.S. 6463289) providing restricting positioning of a target mobile station

Aburai et al. (Pub. No: 2002000953) controlling with limited area information

Kalavade et al. (Pub. No: 20020191575) converging local area

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 571-272-7896. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dai Phuong

AU: 2685

Date: 07-21-2005


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